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CME ACTIVITY

Screening for Alcohol Misuse and Abuse

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The Burden of Alcohol Use

In the United States, alcohol use results in an extraordinary burden on the public's health and welfare. Alcohol is responsible for approximately 79,000 deaths annually, making alcohol use the third-leading cause of preventable death in the country.¹ Within the state of California, alcohol use causes more than 9,400 deaths and is estimated to cause more than \$38 billion in losses each year.

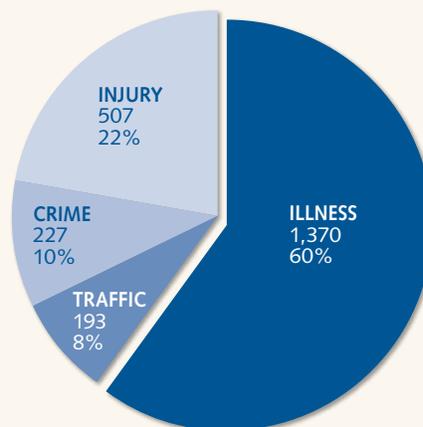
In Los Angeles County, the annual price tag for alcohol use is estimated at \$10.8 billion. This is equal to approximately \$1,000 per county resident, or \$3,100 per family. The total cost includes expenses due to illness, injuries,

crime, and traffic. Illness resulting from alcohol use accounts for \$5.4 billion (50%) of the total alcohol-related county costs. Alcohol-related illnesses include digestive diseases, neuropsychiatric conditions, cardiovascular disease, malignant neoplasms, pregnancy-related conditions, fetal alcohol syndrome, and health consequences of high-risk sex. Injury adds another \$1 billion (9%) to the price tag. Additionally, alcohol causes harm from traffic accidents, falls, suicides, poisoning, and occupational injuries.²

On an annual basis, nearly 2,300 county residents die from alcohol-related causes (see chart below), with more than half of these deaths directly attributable to alcohol-related illnesses. Alcohol-related deaths account for approximately 3.5% of all deaths in the county each year. It therefore makes economic and public health sense to prevent alcohol misuse and to keep alcohol use from escalating to alcohol abuse.

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Alcohol-Related Causes of Death in LA County



TOTAL = 2,297

- Total number of lives lost each year to alcohol use is 2,297.
- Six people die each day due to alcohol use.
- Leading alcohol-related medical conditions causing death include digestive conditions (949), neuropsychiatric conditions (172), and cardiovascular conditions (166).
- There are 28 incidents (e.g., injuries, crimes, high-risk sex) every hour due to alcohol use.
- The total number of incidents related to alcohol use is over 240,000.

Source: Marin Institute, July 2008



Heavy Drinking—Why Physicians Should Screen for It

There are many reasons why primary care physicians should screen for heavy drinking. Here are a number of the most important, identified by the National Institute on Alcohol Abuse and Alcoholism (NIAAA) in its publication, *Helping Patients Who Drink Too Much—A Clinician’s Guide*:

- **At-risk drinking and alcohol problems are common.** About 30% of U.S. adults drink at levels that elevate their risk for physical health, mental health, and social problems.
- **Heavy drinking is often undetected.** In a recent study, approximately 90% of patients with alcohol dependence did not receive the recommended quality of care.
- **Patients are often more receptive, open, and ready to change than you think.** Most patients with alcohol dependence are motivated to change, with those who have the most severe symptoms being the most ready.
- **You are in a prime position to make a difference.** Even brief interventions can promote significant, lasting reductions in persons who are not alcohol-dependent, and those who are dependent will accept referral to addiction treatment programs.

Drinking should be considered “heavy” when it increases an individual’s risk for alcohol-related problems or complicates the management of other problems. Epidemiologic research indicates that the following levels of drinking increase the risk of alcohol-related problems and should therefore be classified as “heavy”:

HEAVY DRINKING

- | | |
|--------------|--|
| Men | <ul style="list-style-type: none">• More than 4 “standard” drinks in any day, <i>OR</i>• More than 14 “standard” drinks during the course of a week |
| Women | <ul style="list-style-type: none">• More than 3 “standard” drinks in any day, <i>OR</i>• More than 7 “standard” drinks during the course of a week |

The Effectiveness of Screening and Interventions

Substance misuse, which includes alcohol misuse, is preventable and treatable. Highly effective prevention, intervention, and support services for substance use disorders yield impressive savings to society. Every dollar invested in prevention services achieves a savings of up to \$7 in substance use treatment and criminal justice system costs. Early and brief interventions have been found to be effective up to 4 years later in reducing alcohol use, days of hospitalization, and emergency department visits. Outcomes that assess substance use, treatment adherence, and relapse indicate that alcohol prevention interventions are as effective as those for other chronic diseases, including hypertension and diabetes.

Of note, the U.S. Preventive Services Task Force (USPSTF) recommends screening and behavioral counseling interventions to reduce alcohol misuse by adults, including pregnant women, in primary care settings (see www.ahrq.gov). The Task Force found good evidence that screening in primary care settings can accurately identify patients whose levels or patterns of alcohol consumption do not meet criteria for alcohol dependence, but place them at risk for increased morbidity and mortality. It also found good evidence that brief behavioral counseling interventions with follow-up produce small-to-moderate reductions in alcohol consumption that are sustained over 6 to 12 months or longer. Studies included in the Task Force review provided some evidence that interventions lead to significantly reduced alcohol consumption, fewer hospital days and reduced all-cause mortality at 4 or more years post-intervention; however, evidence that these interventions reduced specific alcohol-related morbidity was limited. The evidence on the effectiveness of counseling to reduce alcohol consumption during pregnancy was also limited; however, studies in the general adult population show that behavioral counseling interventions are effective among women of childbearing age. The Task Force concluded that the benefits of behavioral counseling interventions to reduce alcohol misuse by adults outweigh any potential harm.

What Is a Standard Drink?

Physicians should make sure to ask about the size of beverages consumed. For example, a patient may tell his doctor that he drinks two beers a night, but he may be referring to two 24-ounce “tall boys.” It should also be noted that some patients do not consider beer to be an alcoholic beverage, so it is better to ask if they drink, “beer, wine, or other alcoholic beverages.”

A standard drink is any drink that contains about 14 grams of pure alcohol, or approximately

- One 12-ounce beer or cooler
- 8-9 ounces of malt liquor
- 5 ounces of table wine
- 3-4 ounces of fortified wine (e.g., sherry or port)
- 2-3 ounces of cordial, liqueur, or aperitif
- 1.5 ounces (one shot) of brandy
- 1.5 ounces (one shot) of spirits (e.g., 80-proof gin, vodka, whiskey)



SCREENING FOR ALCOHOL USE AND MISUSE from page 2

Alcohol may cause or contribute to a number of health problems; screening for risky and problematic drinking is important for preventing the onset of these ailments. Heavy drinkers have an increased risk for hypertension, gastrointestinal bleeding, sleep disorders, major depression, hemorrhagic stroke, cirrhosis of the liver, and several types of cancer.

Early identification of risky drinking can keep a patient from becoming alcohol dependent. Clinical trials indicate that brief interventions can promote significant, lasting reductions in the drinking levels of at-risk drinkers who are not yet dependent on alcohol. Research also shows that patients are receptive to hearing advice after alcohol screening and those who are heavy drinkers show some motivational readiness for change.

Of note, because screening to prevent alcohol misuse is recommended by the USPSTF, under the recent national health care reform legislation, health insurance plans will soon be required to cover this service without copayments or deductibles.

Physicians who wish to learn more about the most effective treatment models and the scientific bases of substance abuse prevention can review information from the Substance Abuse Mental Health Service Administration's National Registry of Evidence-Based Programs and Practices at <http://www.nrepp.samhsa.gov>.

The Four Steps Recommended by the NIAAA

Primary care physicians play an important role both in identifying current heavy drinkers who are at risk for alcohol-related disorders, as well as identifying patients who have existing alcohol use disorders. According to the NIAAA, the primary roles of the primary care physician are as follows:

STEP 1. Ask About Alcohol Use

STEP 2. Assess for Alcohol Use Disorders

STEP 3. Advise and Assist (Brief Intervention)

STEP 4. At Follow-up: Continue Support

The following sections provide detailed information on each of these four steps.

STEP 1. Ask About Alcohol Use

The opportunities for primary care physicians to screen for heavy drinking are manifold. Physicians may ask about drinking habits...

- When prescribing medication that interacts with alcohol
- During a routine exam
- When seeing patients who are pregnant or trying to conceive
- When seeing patients who might drink heavily, such as adolescents, young adults, and smokers
- When seeing patients who experience health problems that might be alcohol-induced (including arrhythmia, depression, anxiety, dyspepsia, insomnia, liver disease, and/or trauma)
- When seeing patients who have a chronic illness that does not respond as expected to treatment (including

chronic pain, depression, diabetes, heart disease, gastrointestinal disorders, and/or hypertension).

The NIAAA *Clinician's Guide* recommends two different screening methods for alcohol use. Primary care physicians should decide which method they will use.

The first method is to ask a single question about the number of heavy drinking days. The question is different for men and women.

ALCOHOL USE SCREENING QUESTION

Men	"How many times in the past year have you had 5 or more drinks in a day?"
Women	"How many times in the past year have you had 4 or more drinks in a day?"

The second method recommended by the NIAAA is a written self-report titled the Alcohol Use Disorders Identification Test, or AUDIT (see page 4), which can be used alone or in conjunction with the single-screening question. The AUDIT takes less than 5 minutes to complete and can be incorporated into a health history.

Because the AUDIT is relatively simple and quick, some physicians prefer to have the patient fill it out before being seen.

Screening should be considered positive when...

- The patient reports 1 or more heavy drinking days
- The AUDIT score is ≥ 8 for men up to age 60, or ≥ 4 for women, adolescents, and men over 60.

For any patient who screens **positive**, determine how many days a week the patient drinks alcohol and how many drinks he or she consumes on a typical drinking day. Based on this information, determine the total number of heavy drinking days, in the past year, as well as the weekly average. Record these numbers in the patient's medical record.

For patients who screen **negative**, discuss maximum limits:

- For healthy men up to the age of 65, advise that they should drink no more than 4 drinks in a day *and* no more than 14 drinks in a week.
- For healthy women (and healthy men over the age of 65), advise that they should drink no more than 3 drinks in a day *and* no more than 7 drinks in a week.
- Recommend lower limits or abstinence if any medical contraindications exist (e.g., taking medications that interact with alcohol, any medical condition exacerbated by alcohol or pregnancy).
- Express your openness to talk about alcohol use and any concerns it may raise.
- Rescreen annually.

STEP 2. Assess for Alcohol Use Disorders

For patients who have screened positive on STEP 1, the next step is to assess whether there is a maladaptive pattern of alcohol use, causing clinically significant impairment or distress. Numerous assessment tools exist to help

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Alcohol Use Disorders Identification Test (AUDIT)

Read questions as written. Record answers carefully. Begin the AUDIT by saying "Now I am going to ask you some questions about your use of alcoholic beverages during this past year." Explain what is meant by "alcoholic beverages" by using local examples of beer, wine, vodka, etc. Code answers in terms of "standard drinks." Record the score for each response in the box.

<p>1. How often do you have a drink containing alcohol? (0) Never [skip to Questions 9&10] (1) Monthly or less (2) 2 to 4 times a month (3) 2 to 3 times a week (4) 4 or more times a week</p> <input style="float: right;" type="text"/>	<p>6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session? (0) Never (1) Less than monthly (2) Monthly (3) Weekly (4) Daily or almost daily</p> <input style="float: right;" type="text"/>
<p>2. How many drinks containing alcohol do you have on a typical day when you are drinking? (0) 1 or 2 (1) 3 or 4 (2) 5 or 6 (3) 7, 8 or 9 (4) 10 or more</p> <input style="float: right;" type="text"/>	<p>7. How often during the last year have you had a feeling of guilt or remorse after drinking? (0) Never (1) Less than monthly (2) Monthly (3) Weekly (4) Daily or almost daily</p> <input style="float: right;" type="text"/>
<p>3. How often do you have 5 or more drinks on one occasion? (0) Never (1) Less than monthly (2) Monthly (3) Weekly (4) Daily or almost daily <i>Skip to Questions 9 & 10 if total score for Questions 2 & 3 = 0</i></p> <input style="float: right;" type="text"/>	<p>8. How often during the last year have you been unable to remember what happened the night before because you had been drinking? (0) Never (1) Less than monthly (2) Monthly (3) Weekly (4) Daily or almost daily</p> <input style="float: right;" type="text"/>
<p>4. How often during the last year have you found that you were not able to stop drinking once you had started? (0) Never (1) Less than Monthly (2) Monthly (3) Weekly (4) Daily or almost daily</p> <input style="float: right;" type="text"/>	<p>9. Have you or someone else been injured as a result of your drinking? (0) No (2) Yes, but not in the last year (4) Yes, during the last year</p> <input style="float: right;" type="text"/>
<p>5. How often during the last year have you failed to do what was normally expected from you because of drinking? (0) Never (1) Less than monthly (2) Monthly (3) Weekly (4) Daily or almost daily</p> <input style="float: right;" type="text"/>	<p>10. Has a relative or friend, doctor, or other health care worker been concerned about your drinking or suggested you cut down? (0) No (2) Yes, but not in the last year (4) Yes, during the last year</p> <input style="float: right;" type="text"/>
<p>Positive Screen: ≥ 8 for men up to age 60; or ≥ 4 for women, adolescents, and men over 60</p> <p style="text-align: right;">Total <input style="width: 40px; height: 20px;" type="text"/></p>	

Sources AUDIT: *The Alcohol Use Disorders Identification Test, Guidelines for Use in Primary Care 2nd Edition*. Babor TF, Higgins-Biddle JC, Saunders JB, Monteiro MG. 2001. World Health Organization, Department of Mental Health and Substance Dependence. Available at http://whqlibdoc.who.int/hq/2001/WHO_MSD_MSB_01.6a.pdf. Also reprinted in the NIAAA's *Helping Patients Who Drink Too Much: Clinician's Guide*, Updated 2005 Edition.

physicians assess for alcohol abuse or dependence, including the Addiction Severity Index (ASI), Adolescent Drug Abuse Diagnosis (ADAD), and Global Appraisal of Individual Needs (GAIN).

The *Diagnostic and Statistical Manual of Mental Disorders 4th Edition (DSM-IV) Revised* also provides a list of symptoms used to assess for alcohol abuse and dependence. These symptoms have been adapted into a tool developed by the NIAAA (see box Assessing for Clinically Maladaptive Drinking). This tool asks questions in two different areas to determine the following:

- 1) Whether the patient has alcohol abuse
- 2) Whether the patient has alcohol dependence.

The questions included in this tool are intended to guide the clinician in discussing the presence of maladaptive behaviors. If patients answer Yes to at least 1 of the questions about risks, relationships, roles, or run-ins with law enforcement, they are considered to have alcohol abuse. If they answer Yes to at least 3 of the 7 questions on alcohol use (stick to limits, cut down, tolerance, withdrawal, problems, a lot of time drinking, less time spent on other matters), then the individual is considered to have alcohol dependence. For physicians who would like to review additional information in this area, additional questions are available at www.niaaa.nih.gov/guide.

It is very important that physicians take time to assess the severity and extent of all alcohol-related symptoms to accurately guide decisions about clinical management. To determine the level of alcohol use and whether the patient has alcohol abuse or dependence, it may be necessary to schedule a more comprehensive assessment. This will assist in determining whether there is a maladaptive pattern of alcohol use

that causes clinically significant impairment or distress.

When a patient meets the criteria for either alcohol abuse or alcohol dependence, the clinician should proceed to STEPs 3 and 4. When the assessment indicates that a patient *does not* have alcohol abuse or dependence, the physician should advise the patient that the level of alcohol consumption is more than what is considered medically safe, counsel that he or she is at risk for alcohol-related problems, and gauge the patient's readiness to change his or her drinking habits.

WHAT TO SAY TO HEAVY DRINKERS WITHOUT ALCOHOL ABUSE OR DEPENDENCE

1. "You are drinking more than is medically safe and are at risk for developing alcohol-related problems."
2. "I strongly recommend that you cut down (or quit), and I'm willing to help you."
3. "Are you willing to make changes in your drinking?"

STEP 3. Advise and Assist (Brief Intervention)

When the assessment indicates that a patient *does* have substance abuse or dependence, the physician should clearly state the conclusion of the assessment, as follows:

"I believe that you have an alcohol use disorder."

The physician should assure that the patient understands the results of the assessment as well as medical problems that may be associated with continued use. Clear statements by physicians about their professional assessment of the presence of alcohol abuse can have a tremendous impact on patient decisions on future use of alcohol.

Next, the physician should make a clear statement of recommendation and ask a follow-up question:

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Assessing for Clinically Maladaptive Drinking

Assessing for alcohol abuse

Determine whether in the past 12 months your patient's drinking has repeatedly caused or contributed to

- Risk** of bodily harm (drinking and driving, operating machinery)
- Relationship** trouble (family or friends)
- Role failure** (interference with home, work, or school obligations)
- Run-ins** with the law (arrests or other legal problems)

If Yes to **1 or more**, your patient has **alcohol abuse**
Regardless of the score, proceed to assess for alcohol dependence.

Assessing for alcohol dependence

Determine whether in the past 12 months your patient has

- Not been able to stick to drinking limits** (repeatedly gone over them)

- Not been able to cut down or stop** (repeated failed attempts)
- Shown tolerance** (needed to drink a lot more to get the same effect)
- Shown signs of withdrawal** (tremors, sweating, nausea, or insomnia when trying to quit or cut down)
- Kept drinking despite problems** (recurrent physical or psychological problems)
- Spent a lot of time drinking** (or anticipating or recovering from drinking)
- Spent less time on other matters** (activities that had been important or pleasurable)

If Yes to **3 or more**, your patient has **alcohol dependence**

If either assessment is positive, proceed to STEP 3 (Advise and Assist)

What to Tell Parents Who Think Their Children Are Drinking

Occasionally, physicians' adult patients will ask for advice on how to talk to their children about alcohol use. The parent may suspect that his or her child is already drinking or may want to preempt potential future use.

Signs of Alcohol Use

Physicians can advise patients to look for the following signs if they suspect their teen is using alcohol:

- Changes in mood: irritability, depression, defensiveness
- Problems at school: slipping grades, disciplinary action, poor attendance
- Switching friends and reluctance to have parents meet the new friends
- Low energy or fatigue
- Physical or mental changes such as poor memory, coordination, and/or concentration; slurred speech; or bloodshot eyes
- Finding alcohol in the child's room or backpack or smelling alcohol on his or her breath
- Irresponsible behavior, including missed curfews.

Physicians should remind patients, however, that the teen years can be turbulent and that many of these signs do not automatically indicate that their child is drinking.

Discussing Alcohol Use

In talking with their teens, parents should begin by encouraging overall conversation and asking open-ended questions. This shows youth that their parents value their opinions. Parents should also control their emotions and avoid reacting when their child says something they don't like or disagree with. Parents should show their children that they notice and appreciate their efforts and accomplishments. While respecting a teen's growing need for independence, a parent should draw clear expectations for behavior and establish and enforce consequences for rule breaking.

A good way for parents to start "the alcohol talk" with their kids is by asking them what they know about alcohol and why they think children drink. Parents should make sure not to interrupt their children. Once the teen is done speaking, then parents can share some facts about alcohol, including the following:

- Alcohol is a sedative that slows down the body and mind. It affects coordination, reaction time, vision, clear thinking, and judgment.
- It takes about 2 to 3 hours for alcohol to clear an individual's system. Eating, drinking coffee, showering, etc. do not accelerate this process. Also, 1 beer, 1 glass



of wine, and 1 shot of hard liquor are equivalent—beer and wine are not safer.

- Because alcohol impairs judgment, it makes people feel as if they are capable of a task—such as driving—when they aren't.

Preventing Alcohol Use

Physicians may also advise patients on steps they can take to prevent alcohol use in their children. Here are a few:

- Keeping track of liquor in the house to ensure that parents are not the unwitting suppliers of alcohol.
- Getting to know other parents so that avenues of communication are open with them. Parents can work together to ensure that youth are supervised.
- Keeping track of their children's whereabouts and activities. Parents should convey that they are keeping tabs not out of mistrust, but because they care.
- Setting a good example by using alcohol in moderation and demonstrating healthy ways to deal with stress.
- Not showing any support of teen drinking.
- Helping their children develop friendships with children who do not drink and are healthy influences.
- Encouraging fun, healthy activities so that youth do not drink out of boredom.

Parents who need additional help with their child's drinking can seek it from a school counselor, teacher, professional therapist, or their pediatrician. To locate an appropriate treatment center for their child in Los Angeles County, parents may contact a Community Assessment Services Center, at (800) 564-6600.

Recommendation and Question

“I strongly recommend that you quit drinking, and I am willing to help you.”

AND

“Are you willing to consider making changes in your drinking?”

At this point, some patients will say No, that they are unwilling to commit to any change in their drinking. Physicians should not be discouraged when this occurs. Ambivalence is common, and your conclusion and recommendation have likely changed the patient’s awareness and thinking. In response to patients who refuse to consider changing their drinking:

- **Restate your concern** about his or her health.
- **Encourage reflection** by asking the patient to weigh what he or she likes about drinking in relation to the benefits of cutting down, and by asking the patient to identify the top one or two barriers to making the change.
- **Reaffirm your willingness** to help when the patient is ready.

For patients who say Yes, that they are willing to change their drinking, physicians should negotiate with the patient to set a goal to cut down to within maximum limits (see STEP 1), or abstain for a time. When a patient is willing to further examine his or her alcohol use, help the patient identify steps to achieve that goal. Additional materials, such as *Rethinking Drinking: Alcohol and Your Health*, can be reviewed by the patient at home to help guide him or her when examining the level and frequency of alcohol consumption. Having a few copies of this document available in the the office can enable physicians to help their patients get started on making their plan. This document can be downloaded at http://pubs.niaaa.nih.gov/publications/RethinkingDrinking/Rethinking_Drinking.pdf.

In addition to goal-setting and identifying next steps, the physician should encourage the patient to seek additional supportive services, including attending group sessions or regular treatment services, and evaluate whether medically managed withdrawal (detoxification) or prescription medications for alcohol dependence are needed. At follow-up appointments, the physician should determine whether the patient was able to meet his or her goal(s), and continue to provide ongoing support and referrals for services to address alcohol abuse or dependence issues.

STEP 4. At Follow-up: Continue Support

Follow-up appointments are critical to continue support of changing alcohol consumption behaviors. At each follow-up visit, physicians should discuss the amount of alcohol use and document this in the medical record. The physician and patient should discuss any barriers to success and whether goals were met. If alcohol consumption has increased, consider referring the patient for additional services.

Specific recommendations for each category of patient (at-risk drinking only versus alcohol abuse/dependence), depending on whether he or she has been able to meet and

sustain the goals, are as follows:

Patients with at-risk drinking only (No abuse or dependence)

For patients who have NOT been able to meet and sustain their goal:

- Acknowledge that change is difficult.
- Support any positive change and address barriers to reaching the goal.
- Renegotiate the goal and plan; consider a trial of abstinence.
- Consider engaging “significant others” in the process.
- Reassess the diagnosis.

For patients who have been able to meet and sustain their drinking goal:

- Reinforce and support continued adherence to recommendations and goals.
- Renegotiate drinking goals as indicated.
- Encourage the patient to return if unable to maintain adherence.
- Rescreen annually.

Patients with alcohol use disorders (Abuse or dependence)

For patients who have NOT been able to meet and sustain their goal:

- Acknowledge that change is difficult.
- Support efforts to cut down or abstain, while making it clear that your recommendation is to abstain.
- Relate drinking to problems (medical, psychological, and social), as appropriate.
- Consider referring to or consulting with an addiction specialist, recommending a mutual help group, engaging “significant others,” and/or prescribing a medication for alcohol-dependent patients who endorse abstinence as a goal.
- Address co-occurring disorders (medical and psychiatric), as needed.

For patients who have been able to meet and sustain their drinking goal:

- Reinforce and support continued adherence to recommendations and goals.
- Coordinate care with a specialist if the patient has accepted referral.
- Maintain medications for at least 3 months and as clinically indicated thereafter.
- Treat coexisting nicotine dependence for 6 to 12 months after reaching the drinking goal.
- Address co-occurring disorders (medical and psychiatric) as needed.

The Stages of Change Model

Patients are at varying degrees of readiness to address their alcohol-related issues. Some are at-risk for alcohol abuse or dependence; others are already diagnosed. Therefore,

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physicians should be prepared to meet patients where they are, and recognize that change may not begin immediately.

The Stages of Change (Transtheoretical) Model developed by Prochaska and DiClemente originated in tobacco-cessation research and is now used to help determine readiness to address various health-related issues, including alcohol consumption. The model assumes that change is a process, not an event. As a result, individuals are at different points on a continuum and need different interventions based on a specific stage. The stages are as follows:

Precontemplation	No intention of taking action in the next 6 months
Contemplation	Intends to take action in the next 6 months
Preparation	Intends to take action within the next 30 days and has made some behavioral steps in this direction
Action	Has changed behavior for less than 6 months
Maintenance	Has changed behavior for more than 6 months

Knowing a patient's stage will help guide recommended services or interventions and indicate the degree of necessary follow-up. It will also help clarify why a patient did not follow-through with goals set at previous appointments.

Summary

Though time is often limited during medical appointments and alcohol use may not be the primary reason for the scheduled appointment, it is important to integrate alcohol use screening into the session. The associated health risks and consequences of heavy drinking necessitate its prioritization.

When the results of a screening, such as the AUDIT, indicate possible at-risk or clinically maladaptive drinking, and the physician has initiated discussions about the associated health risks, it is important to follow-through by providing additional resources, referrals, or services for the patient. This follow-up step is crucial because the patient is likely considering his or her level of alcohol consumption and possible short- and long-term impacts of continued use. At this point, the patient is likely more receptive to

information provided by the physician. Depending on the duration of the appointment, this follow-through could range from providing handouts or making referrals, to providing brief intervention services.

When the screening is positive and the physician does not have the time or skills to assess for alcohol abuse or dependence, the physician should refer the patient for assessment and/or services, and should provide educational materials such as *Rethinking Drinking: Alcohol and Your Health*. The patient should also be given information about available treatment services. Insured patients may be referred to a private treatment facility. For uninsured or indigent patients in Los Angeles County, the physician and/or patient may call the Community Assessment Services Centers at (800) 564-6600 to locate an appropriate treatment center. 

The authors are staff members of the Los Angeles County Department of Public Health.

Quick-Link Resources

National Institute on Alcohol Abuse and Alcoholism (NIAAA) – Education and Training Materials <http://www.niaaa.nih.gov/Publications/EducationTrainingMaterials/guide.htm>

National Institute on Alcohol Abuse and Alcoholism (NIAAA) – *Helping Patients Who Drink Too Much: A Clinician's Guide* http://pubs.niaaa.nih.gov/publications/Practitioner/CliniciansGuide2005/clinicians_guide.htm

National Institutes of Health (NIH) – *Rethinking Drinking: Alcohol and Your Health* http://pubs.niaaa.nih.gov/publications/RethinkingDrinking/Rethinking_Drinking.pdf

Mental Health Service Administration's National Registry of Evidence-Based Programs and Practices <http://www.nrepp.samhsa.gov>

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2. The Annual Catastrophe of Alcohol in California: Los Angeles. The Marin Institute. Accessed March 2010 <<http://www.marininstitute.org/site/images/stories/pdfs/coststudylafinal.pdf>>

Free Continuing Medical Education Credit

To obtain CME credit, complete the eLearning module on "Screening for Alcohol Misuse and Abuse" at <https://publichealth.lacounty.gov/elearning>

This educational activity is offered by the LA County Department of Public Health (LAC-DPH). The LAC-DPH is accredited by the Institute for Medical Quality and the California Medical Association to provide continuing medical education (CME) for physicians licensed in California and contiguous states. The LAC-DPH takes responsibility for the content, quality and scientific integrity of this CME activity. The LAC-DPH designates this educational activity for a maximum of 1.0 AMA PRA Category 1 Credit toward the California Medical Association's Certification in Continuing Medical Education and the American Medical Association Physician's Recognition Award. Each physician should only claim those hours of credit he/she actually spent in the educational activity.

Mumps cases on the rise in LA County

Eleven confirmed mumps cases have been identified in Los Angeles County, as of June 9. Halfway into the year, this is higher than the number of cases reported over each of the past three years: 7 cases in 2009, 7 cases in 2008, and 5 cases in 2007.

Eight of the confirmed cases may be related to the multi-state mumps outbreak affecting the Jewish population that was first seen in this country on the East coast. Specifically, cases have been detected in congregate settings, such as schools, colleges, and community centers.

The LA County Department of Public Health has released multiple advisories and provider health alerts and is working with community partners to raise awareness that mumps is a vaccine-preventable illness that is spread by airborne transmission or direct contact with infected saliva or respiratory secretions. Symptoms begin from 12 to 25 days after exposure, and include swelling of salivary glands, fever, and inflammation of the testes in teenage and adult males. Up to 20% of infected individuals may be asymptomatic. Symptoms decrease after one week and usually go away after 10 days but, in some cases, the illness can cause severe symptoms that include inflammation of the testicles, meningitis, and encephalitis.

The Department is advising the public that the best protection against mumps is to have received two doses of the measles-mumps-rubella (MMR) vaccine. Further, those who develop mumps symptoms should contact their doctor immediately and avoid congregate settings where they can spread the disease.

Children under age 19 who do not have health insurance or a regular source of health care can receive low-cost or free MMR vaccines through a Public Health center. Locations can be found by calling the LA County Info line at 2-1-1, or by visiting www.publichealth.lacounty.gov/locator.htm#a.

Pertussis cases increasing in LA County

A total of 147 possible cases of pertussis, or whooping cough, have been identified in Los Angeles County, as of June 9. With this level of activity, the number of reported cases could exceed 2009's total of 155.

This highly contagious bacterial disease has caused the death of 5 infants in California this year, with 2 deaths in LA County. Typically, LA County experiences no more than 1 pertussis-related death annually.

To advise county residents about this upswing in the disease, the LA County Department of Public Health released media and provider alerts, stating that pertussis is a vaccine-preventable disease that is spread by the coughing of an infected individual. Typical symptoms in young children can include intense coughing accompanied by a whooping sound, and post-cough vomiting. Complications can include pneumonia and seizures. Among older children and adults, the primary symptom may be a cough that often lasts for several weeks or longer.

"Infants under 1 year of age are at highest risk for developing severe complications, and tragically are usually infected by a family member or caretaker," said Jonathan E. Fielding, MD, MPH, Director of Public Health and Health Officer.

Children should receive 3 primary vaccinations that protect against pertussis (DTaP) and 2 boosters by ages 4-6. This should be followed by a Tdap booster, which protects against tetanus, diphtheria, and pertussis during the preteen years. Teens or adults who have not received a Tdap booster should do so, particularly if they live in a household with an infant.

Reporting is critical to prevention.
Report all suspect mumps and pertussis cases to the Communicable Disease Reporting System at (888) 397-3993.

State report finds LA County doing well on some health indicators, needs to improve on others

According to a statewide report released in April by the California Department of Public Health, Los Angeles County has one of the lowest age-adjusted per capita death rates in the state, ranking 14th lowest out of the state's 58 counties. The report, "County Health Status Profiles 2010," ranks the counties based on mortality and morbidity rates from a variety of causes and compares them against the state average and the Healthy People 2010 nationwide goals.

Based on the data, fewer county residents are dying from Alzheimer's disease compared to the state average (19.7 versus 25.7 per 100,000 residents, age-adjusted), although there is an increasing disease burden among the county's aging population. Rates of death due to stroke and all cancers, including lung cancer, were well below the state average, easily beating benchmarks for 2010. Other positives for the county include high rates of breastfeeding among mothers with newborns, an important protector against many diseases, and low rates of unintentional injuries.

On the down side, there is room for improvement. When compared to state and national statistics, a greater proportion of county residents suffered from fatal heart disease and diabetes. Deaths due to diabetes hit 23.4 per 100,000 residents, between 2006 and 2008, exceeding the state average of 21.1. LA County also suffered the 11th highest rate of fatal coronary heart disease in the state, with 151.1 deaths per every 100,000 residents, as compared to the state average of 137.1.

The full report is available online at www.cdph.ca.gov. 

Infection Update: West Nile Virus

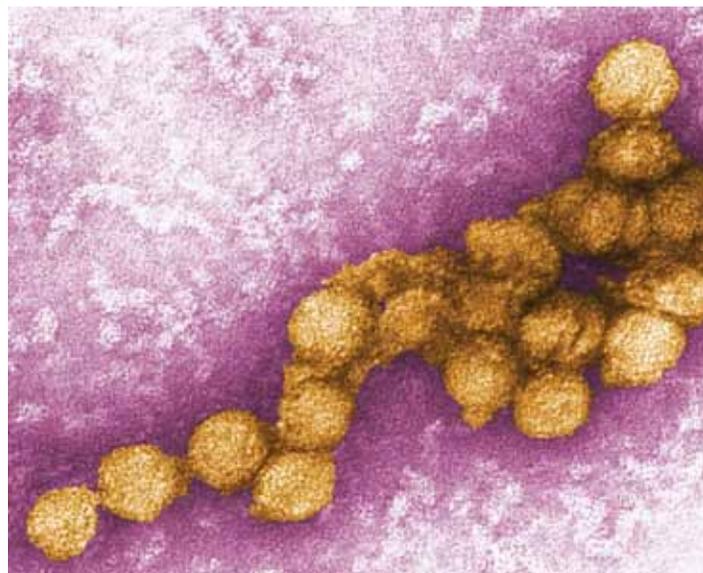
The arrival of summer in Los Angeles County marks the return of West Nile virus (WNV) season. Now enzootic among birds and mosquitoes in the County, WNV infection in humans is expected to occur each year. Between 1 and 309 cases have been reported each year to the Los Angeles County Department of Public Health since the infection was first identified in LA County in 2003. In 2009, only 25 cases (including 5 asymptomatic blood donors) were documented, a decrease of more than 85% from 170 cases in 2008.

West Nile virus has tended to cluster in specific areas of the County. In most years, one-third to one-half of documented cases have occurred among residents of the San Fernando Valley or San Gabriel Valley. However, last year, nearly half of the cases were documented among residents of the Antelope Valley.

WNV human cases typically do not occur in LA County until June, so now is the time to prepare. Animal and vector surveillance efforts have already detected positive dead birds, the first detection of any WNV activity in the state. The birds were found in the San Fernando Valley and Central Los Angeles. Physicians should be on the alert for potential cases, know proper diagnostic procedures, report cases promptly, and educate their patients on how to protect themselves against infection. Throughout the summer and fall, the Department of Public Health provides a weekly update of human WNV infection in LA County. The update can be found at www.publichealth.lacounty.gov/acd/VectorWestNile.htm

Diagnostic Testing

West Nile virus serological testing is recommended only for patients with signs or symptoms compatible with West Nile fever, meningitis, encephalitis, or acute flaccid paralysis



CDC/ P.E. Rollin

Transmission electron micrograph of the West Nile virus

(see Diagnostic Testing Guidelines for WNV). Additionally, since 2003, all blood donors have been screened for asymptomatic WNV infection by polymerase chain reaction (PCR)-based testing to prevent WNV transmission to blood-product recipients. Clinical specimens testing positive for acute WNV infection by commercial labs generally do not require confirmation by the Public Health Laboratory. Excellent correlation has been found between WNV positive tests from the majority of commercial labs and subsequent confirmation at reference public health laboratories. The Public Health Lab

Diagnostic Testing Guidelines for WNV

WNV testing is available at the Public Health Laboratory for individuals with any of the following signs or symptoms:

- Encephalitis
- Aseptic meningitis (individuals 18 years of age or older)
- Acute flaccid paralysis or atypical Guillain-Barré syndrome
- Febrile illness compatible with West Nile fever syndrome
 - Case must be evaluated by a health care provider
 - Symptoms associated with West Nile fever syndrome can be variable and often include headache, fever ($\geq 38^{\circ}\text{C}$), and muscle weakness, rash, swollen lymph nodes, eye pain, nausea or vomiting.

Send specimens and lab slips to

LA County Public Health Laboratory, Serology Section
12750 Erickson Ave.
Downey, CA 90242
Phone: (562) 658-1300

Instructions for Sending Specimens

REQUIRED

- **Acute Serum:** 5-10 mL of blood obtained at least 7 days after symptom onset; use a red-top tube, spun, separated, and refrigerated.
- **Convalescent Serum:** Only if West Nile infection is highly suspected and acute serum is negative, ≥ 5 mL of blood collected 3-5 days after the acute serum.
- **Cerebral Spinal Fluid:** 1-2 cc stored frozen.
- Each specimen should be labeled with date of collection, specimen type, and patient name.
- Specimens should be sent on cold pack using an overnight courier.
- The Los Angeles County Public Health Laboratory requisition form should be completed and attached. The form is available at www.publichealth.lacounty.gov/lab/labsamps.htm

is available to verify the initial symptomatic WNV cases each season and confirm ambiguous results.

Reporting of Human West Nile Virus Cases

The Department of Public Health conducts surveillance on human WNV infections by tracking occurrences of West Nile fever, neuroinvasive disease, and asymptomatic blood donors. WNV infection has been reportable in California since July 2004. Physicians and laboratories are required to report all positive laboratory findings of WNV, whether or not they are confirmed, to the Department of Public Health within 1 working day. Timely identification and reporting of infections assists in prevention by alerting local mosquito abatement districts to higher-risk communities. Case information also guides the Department of Public Health in directing health education efforts toward specific target audiences via the media and local organizations.

A standard Confidential Morbidity Report (see back page) can be used to report suspected cases. The completed report may be faxed to the Department of Public Health Morbidity Unit (1-888-397-3778) or reported by phone (1-888-397-3993). All cases of acute encephalitis and meningitis, including viral, bacterial, fungal and parasitic etiologies, are reportable to the Department of Public Health within 1 working day.

Preventing Mosquito Bites

Time spent outdoors increases the risk of exposure to mosquitoes and the risk of WNV infection for people of all ages. Infected individuals over 50 years of age as well as those with hypertension and diabetes are at higher risk for developing neuroinvasive disease (meningitis, encephalitis, or acute flaccid paralysis), disability, or even death. Since there is no specific treatment available for WNV infection, the best protection is preventing mosquito bites by...

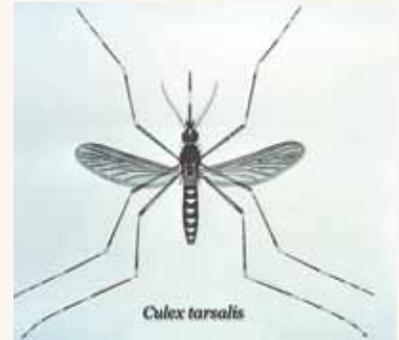
- Eliminating standing water on property, as this is where mosquitoes breed. Drain pots, unclog gutters, and keep swimming pools, wading pools, and fountains clean and chlorinated or drained and covered.
- Making sure that door and window screens are in good condition.
- When outdoors, using an insect repellent containing at least one of the following ingredients: DEET, picaridin, oil of lemon eucalyptus (not as long lasting), or IR3535. Always follow product directions. Updated information (from May 8, 2008) on mosquito repellents is available at www.cdc.gov/ncidod/dvbid/westnile/resources/uprepinfo.pdf.

Patient education materials on WNV prevention, including information about reporting dead birds and mosquito abatement, can be downloaded and/or ordered free of charge at the following websites:

www.publichealth.lacounty.gov/acd/VectorWestNile.htm
www.westnile.ca.gov/
www.cdc.gov/ncidod/dvbid/westnile/index.htm

For questions or complaints about mosquitoes...

The Los Angeles County Department of Public Health is responsible for monitoring and addressing human health problems in our County but is not directly involved with mosquito-control activities.



This important function is managed

by the County's seven mosquito control (abatement) districts. To find a specific district by ZIP code, go to www.lacounty.info/VCD_ZIP_7-28-04.pdf.

For questions about West Nile virus and mosquito control, contact the appropriate health department.

Los Angeles County Mosquito Abatement Districts

Antelope Valley Mosquito and Vector Control District
(661) 942-2917

Compton Creek Mosquito Abatement District
(310) 639-7375

Greater Los Angeles County Vector Control District
(562) 944-9656

Los Angeles County West Vector Control District
(310) 915-7370

City of Long Beach
(562) 570-4132

City of Pasadena
(626) 744-6005

San Gabriel Valley Mosquito and Vector Control District
(626) 814-9466

Neighboring Health Departments

Orange County
(714) 971-2421

Ventura County
(805) 981-5101

Riverside County
(951) 358-5107

San Bernardino County
(800) 782-4264

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Rx for Prevention

Promoting health through prevention in Los Angeles County

Upcoming Training

Immunization Training Resources for Clinicians

The Los Angeles County Department of Public Health Immunization Program, the California Department of Public Health, the CDC and other entities offer a variety of web-based and in-person immunization training programs for clinicians and staff. Some programs offer CMEs and CEUs at no charge.

Visit www.ph.lacounty.gov/ip/trainconf.htm for a list of upcoming trainings



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Comments or Suggestions? If so, or if you would like to suggest a topic for a future issue, e-mail Dr. Jeffrey Gunzenhauser, co-editor, at jgunzenhauser@ph.lacounty.gov.

Index of Disease Reporting Forms

All case reporting forms from the LA County Department of Public Health are available by telephone or Internet.

Animal Bite Report Form
Veterinary Public Health (877) 747-2243
www.publichealth.lacounty.gov/vet/biteintro.htm

Animal Diseases and Syndrome Report Form
Veterinary Public Health (877) 747-2243
www.publichealth.lacounty.gov/vet/disintro.htm

Adult HIV/AIDS Case Report Form
For patients over 13 years of age at time of diagnosis
HIV Epidemiology Program
(213) 351-8196
www.publichealth.lacounty.gov/HIV/hivreporting.htm

Pediatric HIV/AIDS Case Report Form
For patients less than 13 years of age at time of diagnosis
Pediatric AIDS Surveillance Program
(213) 351-8153
Must first call program before reporting
www.publichealth.lacounty.gov/HIV/hivreporting.htm

Confidential Morbidity Report of Tuberculosis (TB) Suspects & Cases
Tuberculosis Control (213) 744-6160
www.publichealth.lacounty.gov/tb/forms/cmr.pdf

Lead Reporting
No reporting form. Reports are taken over the phone.
Lead Program (323) 869-7195

Reportable Diseases & Conditions Confidential Morbidity Report
Morbidity Unit (888) 397-3993
Acute Communicable Disease Control
(213) 240-7941
www.publichealth.lacounty.gov/acd/reports/CMR-H-794.pdf

Sexually Transmitted Disease Confidential Morbidity Report
(213) 744-3070
www.publichealth.lacounty.gov/std/providers.htm (web page)
www.publichealth.lacounty.gov/std/docs/H1911A.pdf (form)

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